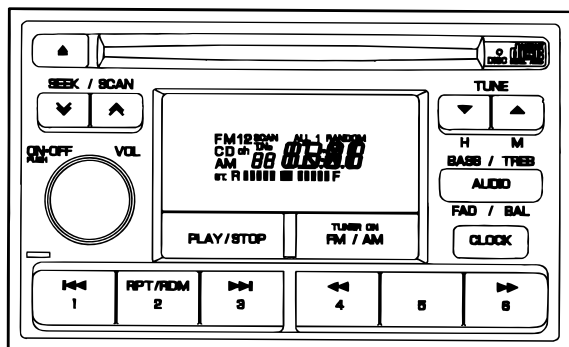


# Service Manual



NISSAN  
Automobile Genuine  
AM/FM Radio CD Player

Model **PN-2218I**  
(Genuine No. 28185 9E000 )  
(ID No. CY516)

## SPECIFICATIONS

### Radio section

Tuning system: PLL Frequency synthesizer system  
Receive range: AM 530kHz to 1,710kHz  
FM 87.75MHz to 107.9MHz  
Intermediate frequency:  
AM 450kHz  
FM 10.7MHz  
Quieting sensitivity: AM Less than 32dB  $\mu$  (at 20dB S/N)  
FM Less than 11dB  $\mu$  (at 30dB S/N)  
Separation: FM More than 20dB  
Auto tuning stop sensitivity:  
AM 32  $\pm$  8dB  $\mu$   
FM 27  $\pm$  8dB  $\mu$

### CD section

Disc size: Compact disc 12cm or 8cm  
S/N ratio: More than 74dB  
(1kHz, IHF-A, 5W output power)  
Separation: More than 50dB  
(1kHz, 0.5W output power)  
Distortion: Less than 0.4%  
(1kHz, 0.5W output power)

### General

Load impedance: 4  $\Omega$ /CH  
Output power: 15W  $\times$  4  
Power supply voltage:  
DC13.2V (10.8V to 15.6V)  
Negative ground  
Consumptive current:  
Less than 10A  
Dimensions (mm): 180(W)  $\times$  108(H)  $\times$  160(D)  
Weight: 1.5kg

Specifications and design are subject to change without notice for further improvement.

## COMPONENTS

### PN-2218I-A

Main unit

1

**To engineers in charge of repair or inspection of our products.**

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

#### 1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.

The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

#### 2. Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc., is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.

If extended damage is caused due to negligence dur-

ing repair,the legal responsibility shall be with the repairing company.

### 3. Check for safety after repair.

Check that the screws,parts and wires are put back securely in their original position after repair.Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.

If extended damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.

### 4. Caution in removal and making wiring connection to the parts for the automobile.

Disconnect the battery terminal after turning the ignition key off.If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur.If extensive damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.

### 5. Cautions regarding chips.

Do not reuse removed chips even when no abnormality is observed in their appearance.Always replace them with new ones.(The chip parts include resistors,capacitors,diodes,transistors,etc).The negative pole of tantalum capacitors is highly susceptible to heat,so use special care when replacing them and check the operation afterwards.

### 6. Cautions in handling flexible PWB

Before working with a soldering iron,make sure that the iron tip temperature is around 270 .Take care not to apply the iron tip repeatedly(more than three times)to the same patterns.Also take care not to apply the tip with force.

### 7. Turn the unit OFF during disassembly and parts

replacement.Recheck all work before you apply power to the unit.

### 8. Cautions in checking that the optical pickup lights up.

The laser is focused on the disc reflection surface through the lens of the optical pickup. When checking that the laser optical diode lights up,keep your eyes more than 30cms away from the lens.Prolonged viewing of the laser within 30cms may damage your eye-sight.

### 9. Cautions in handling the optical pickup

The laser diode of the optical pickup can be damaged by electrostatic charge caused by your clothes and body.Make sure to avoid electrostatic charges on your clothes or body,or discharge static electricity before handling the optical pickup.

#### 9-1. Laser diode

The laser diode terminals are shorted for transportation in order to prevent electrostatic damage.After replacement,open the shorted circuit.When removing the pickup from the mechanism,short the terminals by soldering them to prevent this damage.

#### 9-2. Actuator

The actuator has a powerful magnetic circuit.If a magnetic material is put close to it.its characteristics will change.Ensure that no foreign substances enter through the ventilation slots in the cover.

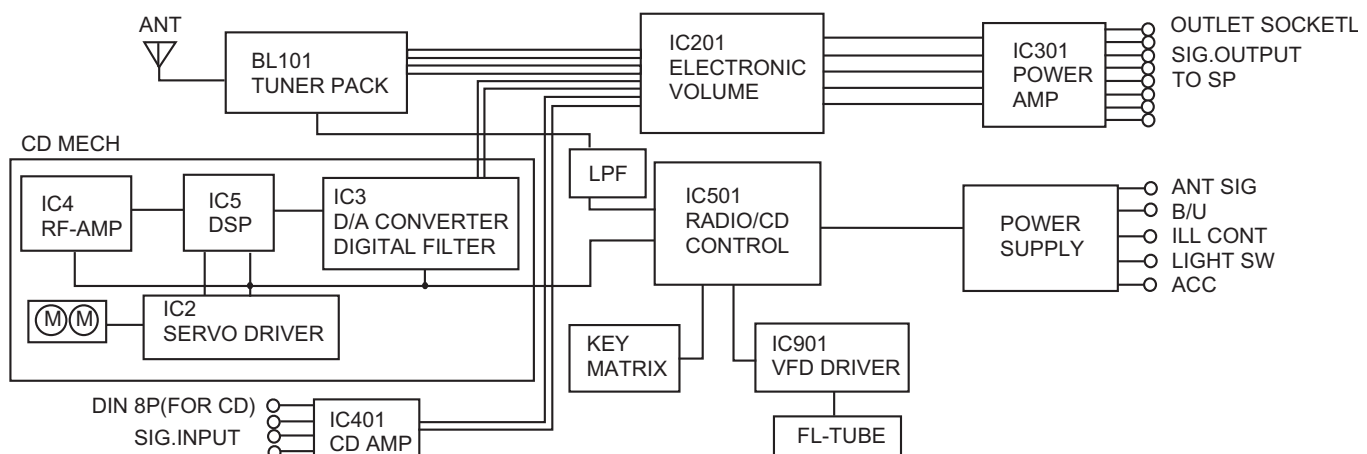
#### 9-3. Cleaning the lens

Dust on the optical lens affects performance.To clean the lens,apply a small amount of isopropylalcohol to lens paper and wipe the lens gently.

## ADJUSTMENTS

Item	Procedure	Measuring instrument
Clock accuracy	1. Turn off and on the ACC switch,while holding CD-EJ button and Power button.Repeat it four times slowly. ("CD ALL 1 RANDAM" appears on the display) 2. Set a universal timer to TP501(BEEP),adjust TC501 so that a reading of the meter is $0 \pm 0.1 \text{ sec./day}$ .	Universal timer
FM noise convergence	1. Input a 98.1MHz/55dB $\mu$ (1kHz 30% MOD) signal. 2. Set an output level of VOL to 0dB(=1.41V). 3. Adjust VR101 so that the output is $-14 \pm 1 \text{ dB}$ when SG output is set $-20 \text{ dB } \mu$ .	SSG Milli volt meter

## BLOCK DIAGRAM



# EXPLANATION OF IC

LC72366-9262 052-1129-00 AM/FM Radio & CD Controller

Outward Form  
80 pins, plastic QFP

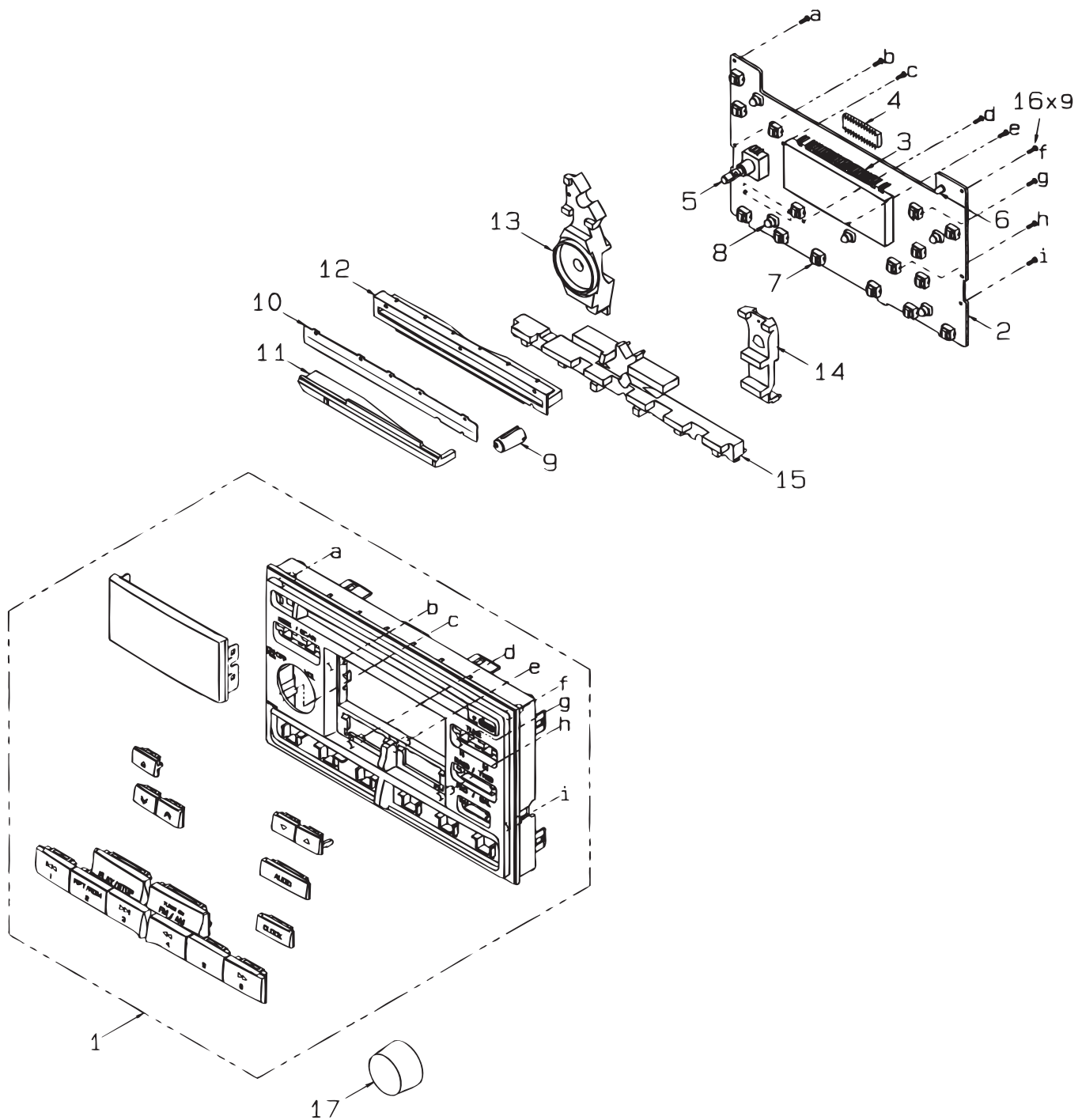
## Terminal Description

No.	Symbol	I/O	Function
80 1	X OUT X IN	O I	Crystal connection
2 3	TEST 2 N.C.	- I	Not in use
4	LD-ON	O	"H" output when laser beam is ON
5	CHA-SW	I	"L" input when disc chucking is completed
6 7	MCW MCCW	O	Loading motor control output
8 9 10	TR-C TR-B TR-A	I	Detection signal input of CD mechanism status
11 12 13 14 15 16 17 18	SQSO SQCK SENSE XRST CLOCK XRAT DATA SCLK	I O I O O O O O	Communication line between DSP IC (CDX2545)
19 20 21 22	KS-0 KS-1 KS-2 KS-3	O	Key matrix output
23 24 25 26	N.C.	O	Not in use
27 28 29 30	KR-0 KR-1 KR-2 KR-3	I	Key matrix input
31	VDD	-	Power supply terminal
32	EJECT-SW	I	EJET switch
33 34 35 36	FL DO FL CLK FL CE FL BLK	O	Communication line to VFD driver IC
37 38	N.C.	O	Not in use
39	AM-ON	O	AM radio ON signal output
40	FM-ON	O	FM radio ON signal output
41	RADIO-ON	O	Radio ON signal output
42	FL-ON	O	Power supply circuit on signal output for fluorescent luminescent display
43	AF-MUTE	O	Audio mute signal output
44	BEEP	O	BBEP OUT (3.75kHz or 2.5 kHz)
45 46	VOL-1 VOL-2	I	Rotation volume pulse detection terminal
47	POWER-SW	I	Power key input
48	N.C.	I	Not in use
49	AMP ON	O	AMP-ON signal output
50	COMBI-ON	O	COMBI-ON (REMOTE OUT) signal input
51	AUX-ON	I	AUX ON (REMOTE IN) signal input
52 53	VOL-CLK VOL-DATA	O	Serial data communication line to electrical volume
54	RF-MUTE	O	AM/FM RF-MUTE signal output
55	SCOR	I	Input of sub code sync signal from DSP IC (CDX2545)
56	ILL-PULSE	I	Monitor input of motion of illumination controller
57 58	N.C.	O	Not in use
59	CD-ON	O	CD-ON signal output
60	SYS-ON	O	System ON signal output

No.	Symbol	I/O	Function
61	ILL-DC	I	Input of luminance control switch of illumination
62	N.C.	I	Not in use
63	ILL-ON	I	Illumination ON signal input
64	TEMP	I	Sensing signal input of in-set temperature
65	CLK-INIT	I	Inputs "H" in this terminal if a set was with clock
66	ST	I	FM stereo detection signal input
67	HOLD	I	ACC detection input (ACC ON = "H")
68	SNS	I	Power voltage sensing input
69	AM-IN	I	AM universal counter input
70	FM-IN	I	FM universal counter input
71 72	EO 3 SUBPD	O	Not in use
73	VDD	-	Power supply terminal
74	AM-OSC	I	AM local oscillation input
75	FM-OSC	I	FM local oscillation input
76	VSS	-	GND
77	EO 2	O	Not in use
78	EO 1	O	Charge pump output (error out)
79	TEST 1	-	Not in use

# EXPLODED VIEW • PARTS LIST

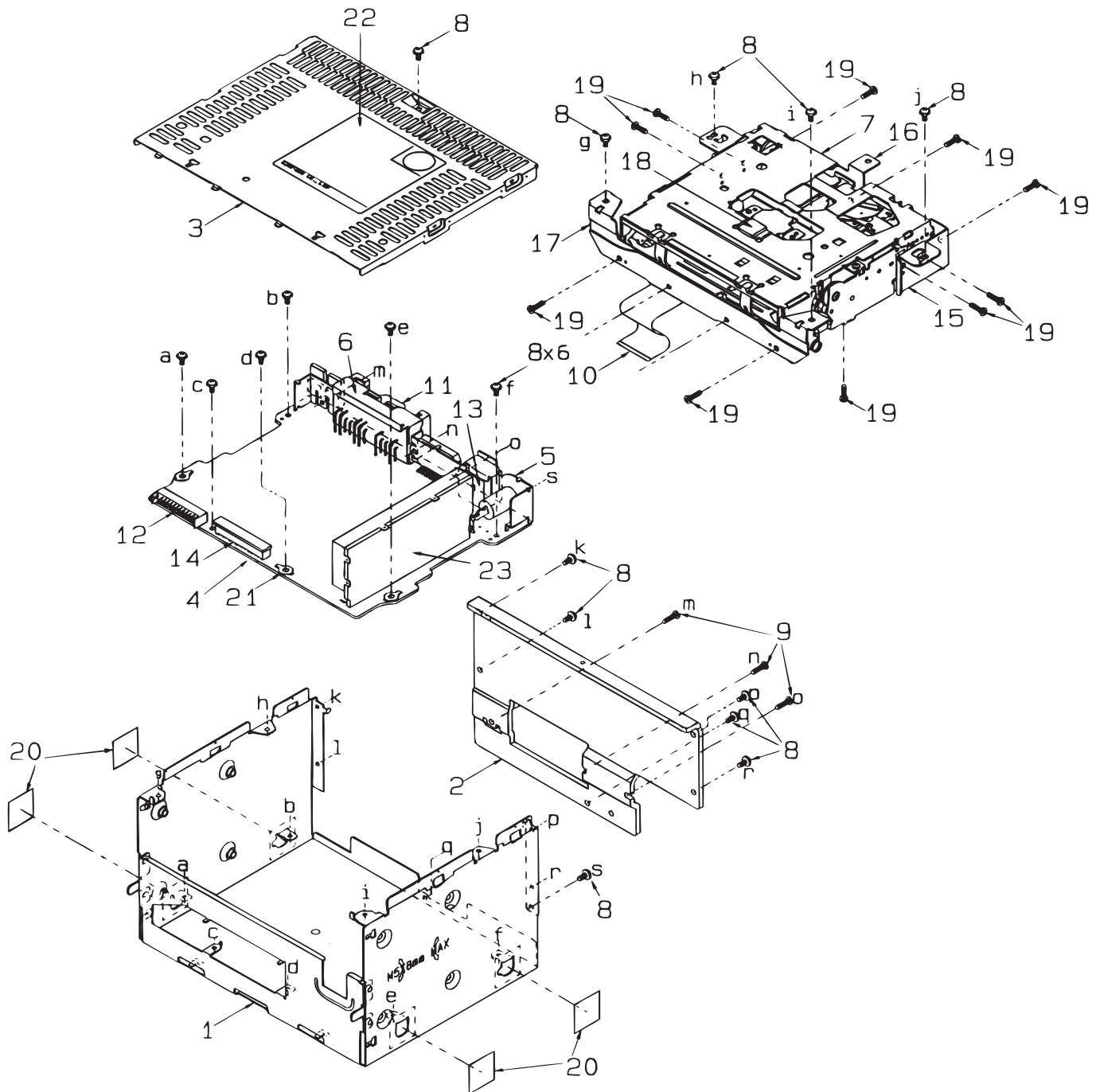
## Escutcheon section



NO.	PART NO.	DESCRIPTION	Q'TY
1	940-7745-00	ESCUTCHEON ASS'Y	1
2	039-0881-00	DISPLAY PWB	1
3	379-4010-20	INDICATOR	1
4	074-1105-24	SOCKET	1
5	016-0010-06	VARIABLE RESISTOR(MAIN)	1
6	001-0412-18	DIODE(CD-IND)	1
7	013-3970-00	SWITCH	15
8	017-0428-09	LAMP ASS'Y	5
9	335-5114-00	INDICATOR LENZ	1

NO.	PART NO.	DESCRIPTION	Q'TY
10	346-0094-01	LEATHER SEET	1
11	335-5118-01	ILLUMI(CD)	1
12	335-5491-00	DISC GUIDE	1
13	335-5115-01	ILLUMI(VOL)	1
14	335-5116-01	ILLUMI(B/T)	1
15	335-5117-02	ILLUMI(BUTTON)	1
16	716-0872-00	PAD SCREW(M1.7 x 5)	9
17	380-5334-50	KNOB(MAIN)	1

## Main section

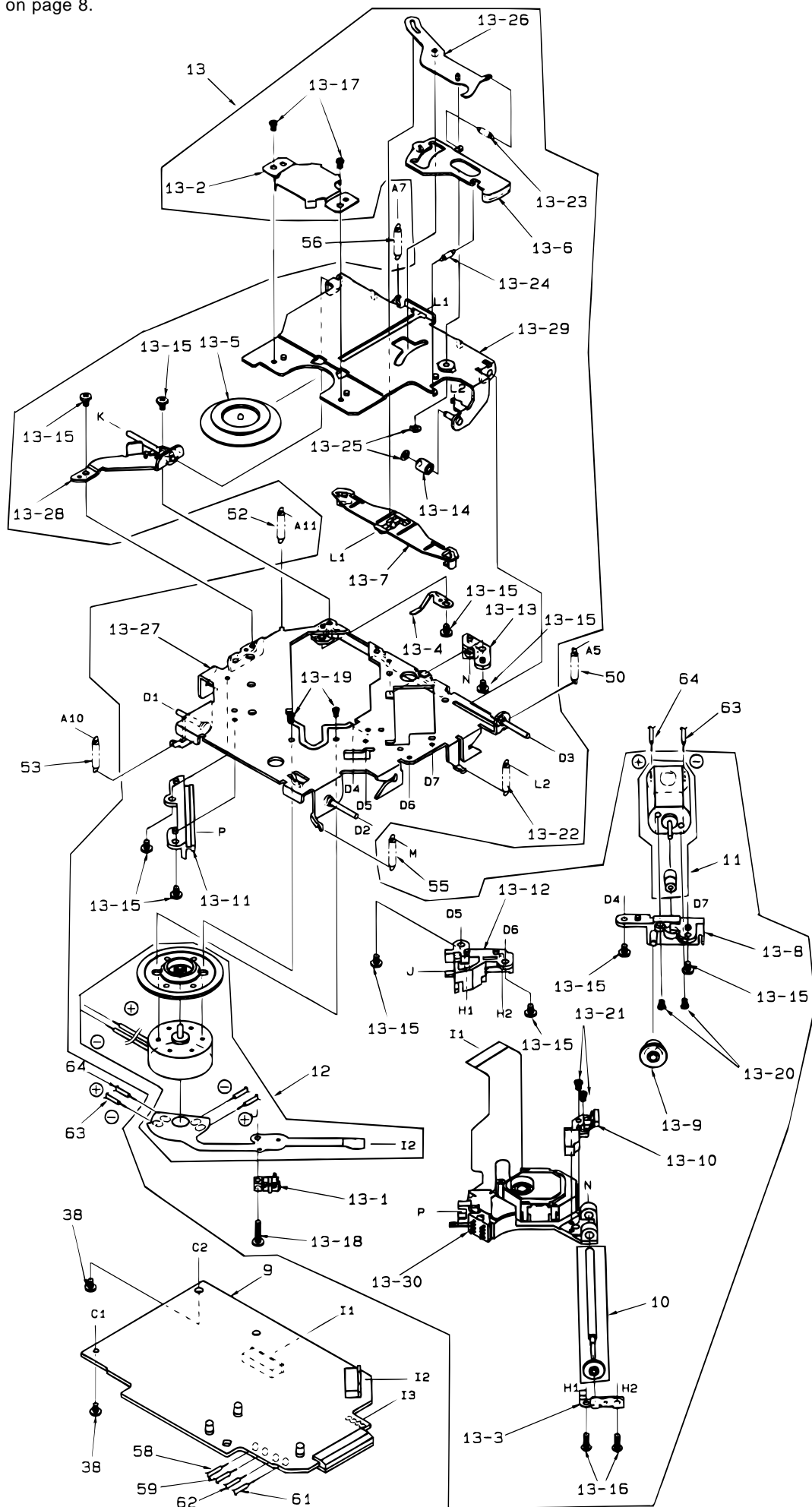


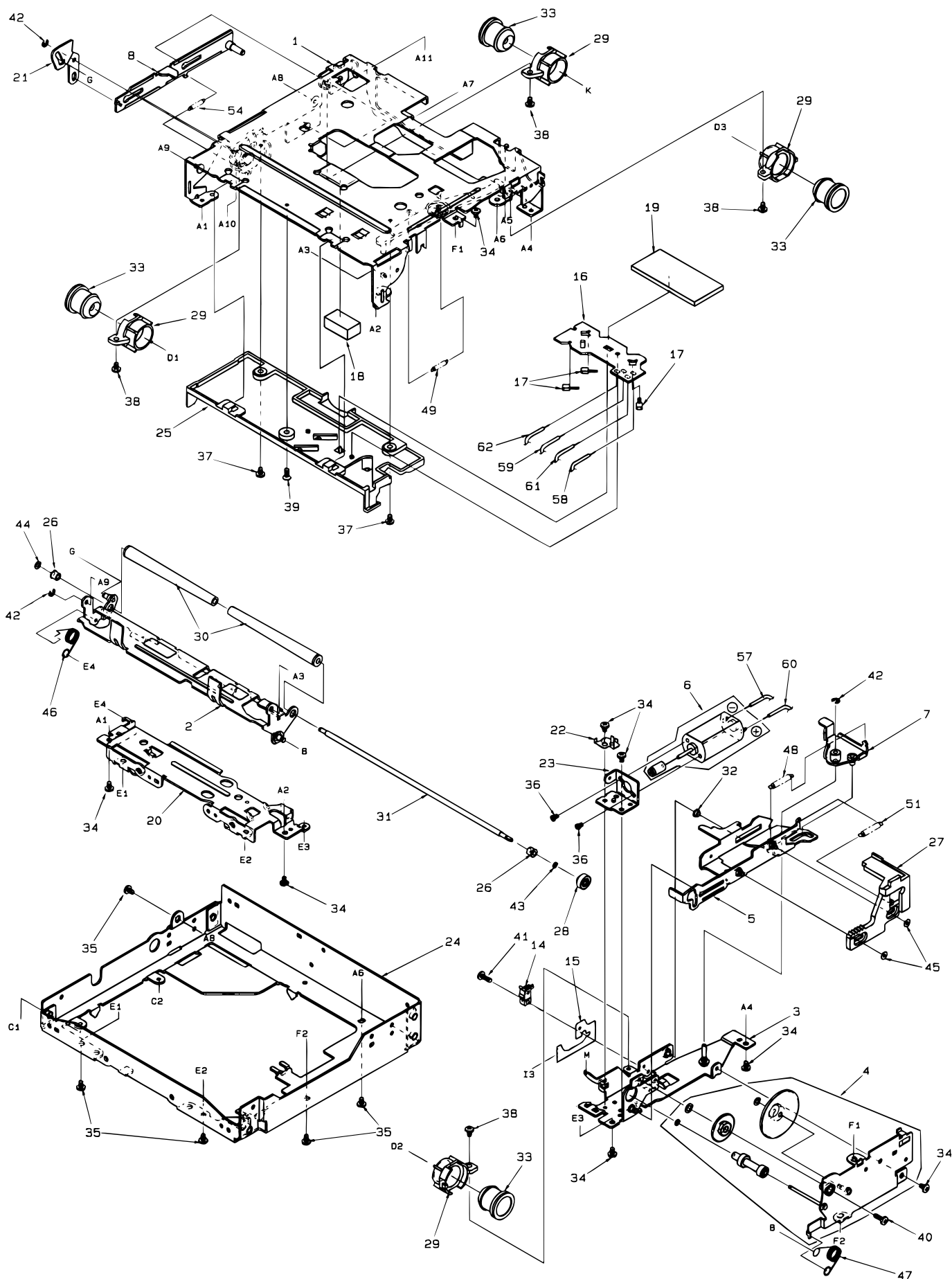
NO.	PART NO.	DESCRIPTION	Q'TY
1	311-1680-00	LOWER CASE	1
2	313-1663-00	HEAT SINK	1
3	310-1561-10	UPPER CASE	1
4	039-0880-02	MAIN PWB	1
5	331-1878-00	ANT HOLDER	1
6	331-1879-00	TR HOLDER	1
7	929-0065-81	CD MECHANISM	1
8	716-1494-10	IT SCREW(M2.6 × 6)	17
9	714-2612-81	MECHINE SCREW(M2.6 × 12)	3
10	816-2427-00	FLAT CABLE	1
11	074-1141-10	OUTLET SOCKET	1
12	076-0515-24	PLUG	1

NO.	PART NO.	DESCRIPTION	Q'TY
13	074-0850-08	OUTLET SOCKET	1
14	074-1150-26	SOCKET	1
15	300-9789-10	MOUNTING BRACKET(R)	1
16	300-9793-50	MOUNTING BRACKET(REAR)	1
17	300-9791-10	MOUNTING BRACKET(FRON)	1
18	345-4138-50	SPACER	1
19	714-2303-81	MACHINE SCREW(M2.3 × 3)	10
20	347-5309-00	SHADE	4
21	073-0731-01	TERMINAL	3
22	286-8765-00	SETPLATE	1
23	880-2079G	TUNER PACK	1

# CD mechanism section : 929-0065-81

Parts list on page 8.





NO.	PART NO.	DESCRIPTION	Q'TY
1	966-0308-09	CHASSIS ASS'Y	1
2	966-0309-04	L-DISC-G-ASS'Y	1
3	966-0310-06	SFT-P-CH-ASS'Y	1
4	HBS-430-100	GEAR-SUB-ASS'Y	1
5	966-0312-06	SHIFT-P-ASS'Y	1
6	SMA-147-100	MOTOR ASS'Y(LOADING)	1
7	966-0358-01	DRIVE-L-PL-ASS'Y	1
8	966-0359-03	SIDE-L-PL-ASS'Y	1
9	HBS-431-100	PWB ASS'Y	1
10	HBS-432-100	LS-GEAR ASS'Y	1
11	SMA-146-100	MOTOR ASS'Y(SLED)	1
12	SMA-151-100	MOTOR ASS'Y(SPINDLE)	1
13	HBS-433-100	DRIVE UNIT	1
13-1	013-7100-00	LIMIT SWITCH	1
13-2	620-0198-03	CLAMPER PLATE	1
13-3	620-0491-03	SPRING PLATE	1
13-4	620-0690-00	RATTLE PLATE	1
13-5	621-0205-02	CLAMPER PLATE	1
13-6	621-0251-03	LOCK LINK	1
13-7	621-0252-03	DISC STOPPER	1
13-8	621-0253-01	MOTOR HOLDER	1
13-9	621-0255-02	SECOND GEAR	1
13-10	621-0257-05	SCREW HOLDER	1
13-11	621-0357-02	PICKUP GUIDE	1
13-12	621-0358-02	LS-HOLDER-F	1
13-13	621-0359-02	LS-HOLDER-R	1
13-14	622-1073-02	CLAMPER ROLLER	1
13-15	714-2003-81	MACHINE SCREW (M2X3)	10
13-16	716-0675-00	SCREW	2
13-17	716-1468-00	SCREW	2
13-18	716-1555-00	WAVE SCREW	1
13-19	716-1733-00	SCREW	2
13-20	732-2004-11	SEMS SCREW	2
13-21	739-1735-17	PRECISION SCREW	2
13-22	750-3097-03	CLAMPER SPRING	1
13-23	750-3098-00	L-LINK SPRING	1
13-24	750-3099-00	ES-SPRING	1
13-25	746-0761-00	WASHER	2
13-26	966-0314-01	STOP LINK ASS'Y	1
13-27	966-0447-04	DR-PLATE ASS'Y	1
13-28	966-0448-00	SIDE PLATE ASS'Y	1
13-29	966-0449-00	CLAMP LINK ASS'Y	1
13-30	969-0005-00	PICKUP UNIT ASS'Y	1
14	013-3879-01	CHUCKING SWITCH	1
15	039-0586-01	CHUCKING SW PWB	1
16	039-0588-01	SENSOR PWB	1
17	060-0252-01	PHOTO TR (PT4850F)	3

NO.	PART NO.	DESCRIPTION	Q'TY
18	345-7513-01	CLAMPER SHEET	1
19	345-7514-00	S-PEB-SHEET	1
20	620-0485-03	FRONT PLATE	1
21	620-0488-01	S-L-LINK PLATE	1
22	620-0489-01	MOTOR PLATE	1
23	620-0492-01	MOTOR BRACKET	1
24	620-0697-01	MECHA BRACKET	1
25	621-0242-02	U-DISC GUIDE	1
26	621-0243-02	ROLLER SLEEVE	2
27	621-0248-06	RACK GEAR	1
28	621-0249-02	ROLLER GEAR	1
29	621-0250-01	DAMPER HOLDER	4
30	621-0258-03	LOADING ROLLER	2
31	622-1072-05	ROLER SHAFT	1
32	622-1219-01	SHIFT ROLLER	1
33	629-0058-00	DAMPER-DL	4
34	714-2003-81	MACHINE SCREW(M2X3)	8
35	714-2603-81	MACHINE SCREW(M2.6X3)	5
36	716-1468-00	SCREW	2
37	716-1507-00	SCREW	2
38	716-1670-00	SCREW	6
39	716-1677-00	SCREW	1
40	716-1704-00	SCREW	1
41	716-1742-00	SCREW	1
42	743-1500-10	E-RING	3
43	746-0712-03	WASHER	1
44	746-0762-00	WASHER	1
45	746-0877-02	WASHER	2
46	750-3090-02	RO-SPRING-L	1
47	750-3091-03	RO-SPRING-R	1
48	750-3092-03	SHIFT SPRING	1
49	750-3094-00	S-ARM SPRING	1
50	750-3096-01	DR-SPRING-R	1
51	750-3098-00	L-LINK SPRING	1
52	750-3164-00	DR-SPRING-LR	1
53	750-3188-00	DR-SP-F-B	1
54	750-3189-00	SIDE-L-SPRING	1
55	750-3201-00	DR-SPRING-F-R	1
56	750-3202-00	CENTER SPRING-B	1
57	800-4904-60	VINYL COAT WIRE(BLK)	1
58	800-4910-60	VINYL COAT WIRE(BLK)	1
59	801-4910-60	VINYL COAT WIRE(BRN)	1
60	802-4904-60	VINYL COAT WIRE(RED)	1
61	802-4910-60	VINYL COAT WIRE(RED)	1
62	804-4910-60	VINYL COAT WIRE(YEL)	1
63	816-2372-00	VINYL COAT WIRE(BLU)	1
64	816-2373-00	VINYL COAT WIRE(WHT)	1



# ELECTRICAL PARTS LIST

## Display PWB section

Note) Several different parts of the same reference number are alternative parts.  
One of those parts is used in the set.

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C 901	043-0206-63	0.022 $\mu$ F	PL 905	017-0428-09		S 906	013-3970-00	SKPEAA
C 902	043-0206-61	0.1 $\mu$ F	Q 901	125-2016-01	DTC114EL	S 907	013-3970-00	SKPEAA
C 903	043-0206-63	0.022 $\mu$ F	Q 902	125-0012-01	DTA114EL	S 908	013-3970-00	SKPEAA
C 904	043-0206-28	47pF CH	Q 903	125-2016-01	DTC114EL	S 909	013-3970-00	SKPEAA
C 905	043-0206-61	0.1 $\mu$ F	R 901	111-1811-91	1/4WS 180	S 910	013-3970-00	SKPEAA
D 901	001-0412-18	GL-3EG8	R 902	111-1831-91	1/4WS 18k	S 911	013-3970-00	SKPEAA
IC 901	051-6011-00	LC75741E	R 950	111-1041-91	1/4WS 100k	S 912	013-3970-00	SKPEAA
L 951	010-2230-76	22 $\mu$ H	S 901	013-3970-00	SKPEAA	S 913	013-3970-00	SKPEAA
PL 901	017-0428-09		S 902	013-3970-00	SKPEAA	S 914	013-3970-00	SKPEAA
PL 902	017-0428-09		S 903	013-3970-00	SKPEAA	S 915	013-3970-00	SKPEAA
PL 903	017-0428-09		S 904	013-3970-00	SKPEAA	VR 902	016-0010-06	
PL 904	017-0428-09		S 905	013-3970-00	SKPEAA			

## Main PWB section

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C 110	043-0277-01	0.022 $\mu$ F	C 408	176-5096-00	5pF CH	L 104	010-2003-04	
C 111	178-1035-79	0.01 $\mu$ F	C 501	171-1042-06	0.1 $\mu$ F Y5R K	L 501	010-2230-64	2.2 $\mu$ H
C 112	182-1063-32	16V10 $\mu$ F	C 502	178-1045-79	0.1 $\mu$ F	L 601	009-0670-00	
C 116	182-1063-32	16V10 $\mu$ F	C 503	182-4763-12	6.3V47 $\mu$ F	Q 151	100-1048-00	2SA1048
C 117	171-2232-06	0.022 $\mu$ F Y5R K	C 505	176-1011-00	100pF CH	Q 151	100-1175-00	2SA1175
C 119	178-3932-78	0.039 $\mu$ F	C 506	176-1011-00	100pF CH	Q 152	125-2003-02	RN1202
C 120	178-3932-78	0.039 $\mu$ F	C 507	176-1011-00	100pF CH	Q 152	125-2007-01	DTC114ES
C 121	178-8232-78	0.082 $\mu$ F	C 508	176-1011-00	100pF CH	Q 153	100-1048-00	2SA1048
C 122	178-2242-78	0.22 $\mu$ F	C 509	176-2201-00	22pF CH	Q 153	100-1175-00	2SA1175
C 123	184-1073-22	10V100 $\mu$ F	C 510	178-1022-78	1000pF	Q 154	125-2003-02	RN1202
C 124	176-1501-00	15pF CH	C 530	178-1022-78	1000pF	Q 154	125-2007-01	DTC114ES
C 125	178-1045-79	0.1 $\mu$ F	C 531	178-1022-78	1000pF	Q 155	102-2458-51	2SC2458Y.GR.BL
C 130	178-1022-78	1000pF	C 601	172-1041-11	0.1 $\mu$ F	Q 156	102-2458-51	2SC2458Y.GR.BL
C 131	178-1022-78	1000pF	C 603	182-2263-32	16V22 $\mu$ F	Q 401	125-2003-02	RN1202
C 132	178-1022-78	1000pF	C 613	182-1063-32	16V10 $\mu$ F	Q 401	125-2007-01	DTC114ES
C 133	178-1022-78	1000pF	C 614	172-1041-11	0.1 $\mu$ F	Q 501	125-0003-02	RN2202
C 151	181-1053-61	50V1 $\mu$ F	C 615	178-1045-79	0.1 $\mu$ F	Q 501	125-0004-01	DTA114ES
C 152	178-1022-78	1000pF	C 616	182-1063-32	16V10 $\mu$ F	Q 502	102-2458-00	2SC2458
C 201	178-1045-79	0.1 $\mu$ F	C 701	182-4763-22	10V47 $\mu$ F	Q 503	125-0003-02	RN2202
C 202	182-1063-32	16V10 $\mu$ F	C 702	182-1063-32	16V10 $\mu$ F	Q 503	125-0004-01	DTA114ES
C 203	182-1063-32	16V10 $\mu$ F	C 703	182-1063-32	16V10 $\mu$ F	Q 504	125-2003-02	RN1202
C 204	176-1011-00	100pF CH	C 704	182-1063-32	16V10 $\mu$ F	Q 504	125-2007-01	DTC114ES
C 205	176-1011-00	100pF CH	C 705	178-4735-79	0.047 $\mu$ F	Q 601	125-2003-02	RN1202
C 207	182-3353-62	50V3.3 $\mu$ F	C 706	182-4763-12	6.3V47 $\mu$ F	Q 601	125-2007-01	DTC114ES
C 208	182-4743-62	50V0.47 $\mu$ F	C 707	178-1045-79	0.1 $\mu$ F	Q 602	125-2003-03	RN1203
C 209	182-4743-62	50V0.47 $\mu$ F	C 708	182-4753-52	35V4.7 $\mu$ F	Q 602	125-2007-02	DTC124ES
C 210	182-3353-62	50V3.3 $\mu$ F	C 709	182-4753-52	35V4.7 $\mu$ F	Q 701	103-1858-00	2SD1858
C 212	182-1053-62	50V1 $\mu$ F	C 710	178-1045-79	0.1 $\mu$ F	Q 702	103-1858-00	2SD1858
C 213	182-1053-62	50V1 $\mu$ F	C 711	184-4773-12	6.3V470 $\mu$ F	Q 703	103-1858-00	2SD1858
C 216	178-5632-78	0.056 $\mu$ F	C 712	178-1045-79	0.1 $\mu$ F	Q 704	103-1858-00	2SD1858
C 217	178-5632-78	0.056 $\mu$ F	C 713	178-1022-78	1000pF	Q 705	101-1240-00	2SB1240
C 218	178-5622-78	5600pF	C 714	184-2273-22	10V220 $\mu$ F	Q 706	125-2003-02	RN1202
C 219	178-5622-78	5600pF	D 602	001-0334-30	RL202	Q 706	125-2007-01	DTC114ES
C 220	182-4763-22	10V47 $\mu$ F	D 603	001-0466-00	S5688B	Q 707	100-1048-00	2SA1048
C 221	178-5622-78	5600pF	D 603	001-0626-00	1A2	Q 707	100-1175-00	2SA1175
C 222	178-5622-78	5600pF	D 604	001-0376-34	MTZJ6.2A	Q 708	100-1048-00	2SA1048
C 223	182-1063-32	16V10 $\mu$ F	D 604	001-0377-34	MA4062L	Q 708	100-1175-00	2SA1175
C 224	182-1063-32	16V10 $\mu$ F	D 605	001-0294-00	1SS133	Q 709	103-2012-00	2SD2012
C 225	178-4735-79	0.047 $\mu$ F	D 605	001-0330-00	1SS119	Q 710	103-1858-00	2SD1858
C 226	184-1083-12	10V1000 $\mu$ F	D 701	001-0376-49	MTZJ10A	Q 711	125-0003-02	RN2202
C 227	172-1041-11	0.1 $\mu$ F	D 701	001-0377-48	MA4091H	Q 711	125-0004-01	DTA114ES
C 228	172-1041-11	0.1 $\mu$ F	D 702	001-0503-31	HZS6 A2L	Q 712	125-2003-02	RN1202
C 229	172-1041-11	0.1 $\mu$ F	D 702	001-4200-31	UZZL-6LA1	Q 712	125-2007-01	DTC114ES
C 230	172-1041-11	0.1 $\mu$ F	D 703	001-0294-00	1SS133	Q 713	125-0003-02	RN2202
C 237	178-5612-78	560pF	D 703	001-0330-00	1SS119	Q 713	125-0004-01	DTA114ES
C 238	178-5612-78	560pF	D 704	001-0503-45	HZS9B1L	Q 714	125-2003-02	RN1202
C 250	182-1063-32	16V10 $\mu$ F	D 704	001-4200-45	UZZL-9M1	Q 714	125-2007-01	DTC114ES
C 251	182-1063-32	16V10 $\mu$ F	D 705	001-0503-31	HZS6 A2L	Q 715	103-2012-00	2SD2012
C 301	184-3383-32	16V3300 $\mu$ F	D 705	001-4200-31	UZZL-6LA1	Q 716	125-2003-02	RN1202
C 302	182-1053-62	50V1 $\mu$ F	D 709	001-0294-00	1SS133	Q 716	125-2007-01	DTC114ES
C 307	182-4753-52	35V4.7 $\mu$ F	D 709	001-0330-00	1SS119	Q 717	125-2003-02	RN1202
C 312	182-4763-32	16V47 $\mu$ F	D 710	001-0346-14	MTZJ T-77 3.0A	Q 717	125-2007-01	DTC114ES
C 313	172-1041-11	0.1 $\mu$ F	D 710	001-0377-11	MA4030M	Q 718	125-2003-02	RN1202
C 401	182-1063-32	16V10 $\mu$ F	D 711	001-0376-70	MTZJ18C	Q 718	125-2007-01	DTC114ES
C 402	182-1063-32	16V10 $\mu$ F	D 711	001-0377-69	MA4180M	Q 719	103-1858-00	2SD1858
C 403	182-1063-32	16V10 $\mu$ F	IC 201	051-5008-00	M62419FP	R 110	111-2291-91	1/4WS 2.2
C 404	182-1063-32	16V10 $\mu$ F	IC 301	051-2013-00	TDA7385	R 111	117-2221-10	1/10W 2.2k
C 405	176-5096-00	5pF CH	IC 401	051-0422-51	NJM4558D	R 114	111-4791-91	1/4WS 4.7
C 406	176-5096-00	5pF CH	IC 501	052-1129-00	LC72366-9262	R 117	111-2221-91	1/4WS 2.2k
C 407	176-5096-00	5pF CH	L 103	010-2230-64	2.2 $\mu$ H	R 118	117-1031-10	1/10W 10k

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
R 122	117-1231-10	1/10W 12k	R 404	117-3011-10	1/10W 300	R 701	111-2291-91	1/4WS 2.2
R 123	117-6831-10	1/10W 68k	R 405	032-0106-65	1/10W 100k ± 0.5%	R 702	111-2291-91	1/4WS 2.2
R 151	117-2221-10	1/10W 2.2k	R 406	032-0106-65	1/10W 100k ± 0.5%	R 703	111-2291-91	1/4WS 2.2
R 152	117-1031-10	1/10W 10k	R 407	032-0106-65	1/10W 100k ± 0.5%	R 704	111-2291-91	1/4WS 2.2
R 153	117-1031-10	1/10W 10k	R 408	032-0106-65	1/10W 100k ± 0.5%	R 705	111-4711-91	1/4WS 470
R 154	117-2221-10	1/10W 2.2k	R 409	032-0106-63	1/10W 47k ± 0.5%	R 706	111-2211-91	1/4WS 220
R 155	111-4721-91	1/4WS 4.7k	R 410	032-0106-63	1/10W 47k ± 0.5%	R 707	111-1021-91	1/4WS 1k
R 156	117-3321-10	1/10W 3.3k	R 411	032-0106-63	1/10W 47k ± 0.5%	R 708	117-1041-10	1/10W 100k
R 157	117-2221-10	1/10W 2.2k	R 412	032-0106-63	1/10W 47k ± 0.5%	R 709	117-2231-10	1/10W 22k
R 201	117-2731-10	1/10W 27k	R 501	032-0092-18	1/10W 4.7k ± 1%	R 710	111-3321-91	1/4WS 3.3k
R 202	117-2731-10	1/10W 27k	R 503	117-2231-10	1/10W 22k	R 711	117-1031-10	1/10W 10k
R 203	117-3321-10	1/10W 3.3k	R 504	117-1031-10	1/10W 10k	R 712	117-3321-10	1/10W 3.3k
R 204	117-3321-10	1/10W 3.3k	R 505	117-1031-10	1/10W 10k	R 713	117-1031-10	1/10W 10k
R 205	117-4721-10	1/10W 4.7k	R 506	117-4731-10	1/10W 47k	R 714	111-3911-91	1/4WS 390
R 206	117-4721-10	1/10W 4.7k	R 507	117-1041-10	1/10W 100k	R 715	117-1041-10	1/10W 100k
R 207	117-1231-10	1/10W 12k	R 508	117-1041-10	1/10W 100k	R 716	117-1531-10	1/10W 15k
R 208	117-1231-10	1/10W 12k	R 509	117-1041-10	1/10W 100k	R 718	117-1041-10	1/10W 100k
R 209	117-1531-10	1/10W 15k	R 512	117-4731-10	1/10W 47k	R 720	111-1011-91	1/4WS 100
R 210	117-1531-10	1/10W 15k	R 513	111-4731-91	1/4WS 47k	R 721	111-2231-91	1/4WS 22k
R 211	111-1021-91	1/4WS 1k	R 514	117-1031-10	1/10W 10k	R 722	117-4721-10	1/10W 4.7k
R 212	111-1021-91	1/4WS 1k	R 515	117-1031-10	1/10W 10k	R 723	111-4711-81	1/2WS 470
R 213	117-3331-10	1/10W 33k	R 517	117-4731-10	1/10W 47k	R 724	111-4721-91	1/4WS 4.7k
R 214	117-3331-10	1/10W 33k	R 519	117-1031-10	1/10W 10k	R 725	117-4721-10	1/10W 4.7k
R 215	111-3331-91	1/4WS 33k	R 530	111-1041-91	1/4WS 100k	R 726	117-4731-10	1/10W 47k
R 216	117-3331-10	1/10W 33k	R 531	111-1021-91	1/4WS 1k	R 727	117-4731-10	1/10W 47k
R 217	117-1051-10	1/10W 1M	R 601	111-4731-91	1/4WS 47k	R 728	111-4731-91	1/4WS 47k
R 218	117-1051-10	1/10W 1M	R 602	111-2291-81	1/2WS 2.2	R 729	117-4731-10	1/10W 47k
R 219	117-1821-10	1/10W 1.8k	R 603	117-2231-10	1/10W 22k	R 730	117-1021-10	1/10W 1k
R 220	111-1031-91	1/4WS 10k	R 604	117-4721-10	1/10W 4.7k	R 731	111-1031-91	1/4WS 10k
R 301	111-1031-91	1/4WS 10k	R 605	111-1021-91	1/4WS 1k	SUP101	060-0122-10	DSP-201M-S00B
R 306	111-8221-91	1/4WS 8.2k	R 700	117-1041-10	1/10W 100k	TC 501	004-1580-10	30pF GRN
R 307	117-2221-10	1/10W 2.2k				TH 501	002-0214-05	DTN-T204C104K
R 401	111-4731-91	1/4WS 47k				VR 101	012-5203-58	33k
R 402	111-4711-81	1/2WS 470				X 501	061-1064-00	4.5MHz
R 403	117-3011-10	1/10W 300						

#### Mech PWB section(CD mechanism)

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C 10	178-1032-78	0.01 μ F	C 36	178-4732-78	0.047 μ F	R 14	117-5631-10	1/10W 56k
C 11	182-1063-32	16V10 μ F	C 37	178-1522-78	1500pF	R 15	117-1021-10	1/10W 1k
C 12	178-1042-78	0.1 μ F	C 38	178-1032-78	0.01 μ F	R 16	117-2211-10	1/10W 220
C 13	182-1073-12	6.3V100 μ F	C 39	042-0230-00	35V0.47 μ F	R 17	117-2211-10	1/10W 220
C 14	178-1032-78	0.01 μ F	C 40	178-1032-78	0.01 μ F	R 18	117-1031-10	1/10W 10k
C 15	182-2263-12	6.3V22 μ F	C 41	178-1042-78	0.1 μ F	R 19	117-2231-10	1/10W 22k
C 16	178-1032-78	0.01 μ F	C 42	178-2222-78	2200pF	R 20	117-1831-10	1/10W 18k
C 17	178-1042-78	0.1 μ F	C 100	182-4763-12	6.3V47 μ F	R 21	117-1031-10	1/10W 10k
C 18	178-1042-78	0.1 μ F	C 101	182-4763-12	6.3V47 μ F	R 22	117-4711-10	1/10W 470
C 19	176-1501-00	15pF CH	C 102	178-1032-78	0.01 μ F	R 23	117-1011-10	1/10W 100
C 20	178-1042-78	0.1 μ F	C 103	182-1073-32	16V100 μ F	R 24	117-1021-10	1/10W 1k
C 21	182-2263-12	6.3V22 μ F	D 1	001-0563-00	GL380	R 25	117-1001-10	1/10W 10
C 22	176-2096-00	2pF CJ	D 2	001-0563-00	GL380	R 26	117-3331-10	1/10W 33k
C 23	178-1042-78	0.1 μ F	D 3	001-0563-00	GL380	R 27	117-3631-10	1/10W 36k
C 24	178-1022-78	1000pF	IC 1	051-1014-10	TA7291S	R 28	117-1241-10	1/10W 120k
C 25	176-1007-00	10pF CH	IC 2	051-6015-05	BA6392FP	R 29	117-3631-10	1/10W 36k
C 26	176-1007-00	10pF CH	IC 3	051-6314-05	TC9404FN	R 30	117-1041-10	1/10W 100k
C 27	182-1073-12	6.3V100 μ F	IC 4	051-1971-00	CXA1610M	R 31	117-1031-10	1/10W 10k
C 28	178-1042-78	0.1 μ F	IC 5	051-6313-00	CXD2545Q	R 32	117-6821-10	1/10W 6.8k
C 29	182-1073-12	6.3V100 μ F	L 1	010-2155-03	10 μ H	R 33	117-3321-10	1/10W 3.3k
C 30	178-1042-78	0.1 μ F	L 2	010-2155-03	10 μ H	R 34	117-1051-10	1/10W 1M
C 31	176-1007-00	10pF CH	L 3	010-2155-03	10 μ H	R 35	117-1041-10	1/10W 100k
C 32	178-2212-78	220pF	Q 1	101-1237-00	2SB1237	R 36	117-1031-10	1/10W 10k
C 33	178-1042-78	0.1 μ F	R 10	111-2711-91	1/4WS 270	X 1	060-1014-00	16.9344MHz
C 34	178-2212-78	220pF	R 11	117-8231-10	1/10W 82k			
C 35	178-1032-78	0.01 μ F	R 12	117-1031-10	1/10W 10k			

#### Limit switch PWB section(CD mechanism)

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
M 1	SMA-151-100	SPINDLE	M 2	SMA-146-100	SLED	S 1	013-7100-00	limit

#### Chuckling switch PWB section(CD mechanism)

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
M 3	SMA-147-100	LOADING	S 2	013-3879-01	CHUCKING

#### Sensor PWB section(CD mechanism)

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
Q 101	060-0252-01	PT4850F	Q 102	060-0252-01	PT4850F	Q 103	060-0252-01	PT4850F